IN THE CLAIMS:

Please AMEND claims 1, 6, 15, 20, 27, 29 and 33 in accordance with the following:

1. (CURRENTLY AMENDED) A <u>computer readable</u> recording medium on which content stream data <u>to be read and executed by the computer</u> is recorded, comprising a Stream OBject (SOB) formed with first and second Stream OBject Units (SOBUs), the first SOBU including first and second application time stamps (ATSs) that indicate reproducing time information of the SOBU, and a first application packet disposed between the first and second ATS in which a portion of the content stream data is packed, and the second SOBU including a second application packet, an end of which represents an end of the SOB <u>and a mid-point of the second SOBU</u>, and a stuffing packet in which the second ATS is copied and in which a payload is recorded.

2. (PREVIOUSLY PRESENTED) The recording medium of claim 1, wherein a size of the application packets are small enough so that the SOBUs, excluding the last SOBU, include at least two entire ATSs.

3. (ORIGINAL) The recording medium of claim 2, wherein the size of the application packet satisfies the following equation:

$$AP\_PKT\_SZ \leq SPayload\_SZ \times \{SOBU\_SZ/2\} - \{ cell((N\_AHE + N\_SByte)/2) + ATS\_SZ\},$$

where AP_PKT_SZ denotes the size of the application packet, ATS_SZ denotes a size of an ATS which is formed in units of bytes, SOBU_SZ denotes a size of an SOBU, SPayload_SZ denotes a size of a data space containing information excluding a fixed header area of a stream pack, N_AHE denotes a number of application header extensions of a corresponding SOBU, and N_SByte denotes a number of stuffing bytes of a corresponding SOBU.

4. (ORIGINAL) The recording medium of claim 3, wherein the size of the application packet satisfies the following equation:

$$AP\_PKT\_SZ \leq 2018 \times \{SOBU\_SZ\} - 6$$

where AP_PKT_SZ denotes the size of the application packet and SOBU_SZ denotes the size of the SOBU.

5.   (ORIGINAL)   The recording medium of claim 4, further comprising:

a MAPping List (MAPL) having an Incremental Application Packet Arrival Time (IAPAT) indicating a duration of the corresponding SOBU as search information indicating which of the SOBUs are included in a corresponding SOB.

6.   (CURRENTLY AMENDED)   A computer readable recording medium on which content stream data to be read and executed by the computer is recorded, comprising a Stream OBject (SOB) formed with first, second, and third Stream OBject Units (SOBUs), the first SOBU including first and second application time stamps (ATSs) that indicate reproducing time information of the SOBU as well as a first application packet disposed between the first and second ATS in which a portion of the content stream data is packed, the second SOBU including a second application packet, an end of which represents an end of the SOB and a mid-point of the second SOBU, and a stuffing packet in which the second ATS is copied and in which a payload is recorded, and the third SOBU including stuffing packets for correction including an ATS.

7.   (PREVIOUSLY PRESENTED)   The recording medium of claim 6, wherein the stuffing packet for correction is recorded continuously after a last application packet included in the SOB.

8.   (ORIGINAL)   The recording medium of claim 7, wherein the predetermined ATS included in the stuffing packet for correction has the same value as an ATS included in the last stream pack.

9.   (ORIGINAL)   The recording medium of claim 8, wherein the stuffing packet for correction further includes a payload in which predetermined data is recorded or no data is recorded.

10.   (ORIGINAL)   The recording medium of claim 9, wherein a "0" is recorded in the payload.

11.   (ORIGINAL)   The recording medium of claim 10, wherein the size of the application packet is small enough so that each of the SOBUs, excluding the last SOBU,

includes at least two entire ATS.

12. (ORIGINAL) The recording medium of claim 11, wherein the size of the application packet satisfies the following equation:

$$AP\_PKT\_SZ \leq SPayload\_SZ \times \{SOBU\_SZ/2\} - \{ cell((N\_AHE + N\_SByte)/2) + ATS\_SZ \},$$

where, AP_PKT_SZ denotes the size of the application packet, ATS_SZ denotes a size of an ATS which is formed in units of bytes, SOBU_SZ denotes a size of an SOBU, SPayload_SZ denotes a size of a data space containing information excluding a fixed header area of a stream pack, N_AHE denotes a number of application header extensions of a corresponding SOBU, and N_SByte denotes a number of stuffing bytes of a corresponding SOBU.

13. (ORIGINAL) The recording medium of claim 12, wherein the size of the application packet satisfies the following equation:

$$AP\_PKT\_SZ \leq 2018 \times \{SOBU\_SZ/2\}-6,$$

where AP_PKT_SZ denotes the size of the application packet and SOBU_SZ denotes the size of the SOBU.

14. (ORIGINAL) The recording medium of claim 13, further comprising:

a MAPping List (MAPL) having an Incremental Application Packet Arrival Time (IAPAT) indicating a duration of the corresponding SOBU as search information indicating which of the SOBUs are included in a corresponding SOB.

15. (CURRENTLY AMENDED) A recording apparatus to record content stream data as a Stream OBject (SOB) formed with at least one Stream OBject Unit (SOBU) having a predetermined size and one or more stream packs, each of the stream packs having an Application Time Stamp indicating reproducing time information and an application packet in which content stream data is packed, the recording apparatus comprising:

a control unit that generates a mapping list as search information;

a clock generation unit that generates a clock value;

a buffer unit that attaches the clock value provided from said clock generating unit to received content stream data, and outputs the received content stream data by buffering the content stream data;

a stream object unit (SOBU) generating unit to generate first and second Stream OBject Units (SOBUs), the first SOBU including first and second application time stamps (ATSs) that indicate reproducing time information of the SOBU, and a first application packet disposed between the first and second ATS in which a portion of the content stream data is packed, and the second SOBU including a second application packet, an end of which represents an end of the SOB and a mid-point of the second SOBU, and a stuffing packet in which the second ATS is copied and in which a payload is recorded; and

a recording unit which records the SOBUs generated by said SOBU generating unit and the mapping list generated by said control unit.

16.   (PREVIOUSLY PRESENTED)   The recording apparatus of claim 15, wherein a size of the application packets are small enough so that each of the SOBUs, excluding the last SOBU, includes at least two entire ATSs.

17.   (ORIGINAL)   The recording apparatus of claim 16, wherein the size of the application packet satisfies the following equation:

$AP\_PKT\_SZ \leq SPayload\_SZ \times \{SOBU\_SZ/2\} - \{ cell((N\_AHE + N\_SByte)/2) + ATS\_SZ\},$

where AP_PKT_SZ denotes the size of the application packet, ATS_SZ denotes a size of an ATS which is formed in units of bytes, $SOBU\_SZ$ denotes size of an SOBU, $SPayload\_SZ$ denotes a size of a data space containing information excluding a fixed header area of a stream pack, N_AHE denotes a number of application header extensions of a corresponding SOBU, and N_SByte denotes a number of stuffing bytes of a corresponding SOBU.

18.   (ORIGINAL)   The recording apparatus of claim 17, wherein the size of the application packet satisfies the following inequality:

$AP\_PKT\_SZ \leq 2018 \times \{SOBU\_SZ/2\} - 6,$

where AP_PKT_SZ denotes the size of the application packet and $SOBU\_SZ$ denotes the size of the SOBU.

19.   (ORIGINAL)   The recording apparatus of claim 18, wherein a MAPping List (MAPL) having an Incremental Application Packet Arrival Time (IAPAT) indicating a duration of the corresponding SOBU is included as search information indicating which of the SOBUs are included in a corresponding SOB.

20.   (CURRENTLY AMENDED)   A recording apparatus for recording content stream data as a Stream OBject (SOB) formed with at least one Stream OBject Unit (SOBU) having a predetermined size, the recording apparatus comprising:

a control unit that generates a mapping list as search information;

a clock generation unit that generates a clock value;

a buffer unit attaching the clock value provided from said clock generating unit to received content stream data, and outputting the received content stream data by buffering the content stream data;

a stream object unit (SOBU) generating unit to generate first, second, and third Stream OBject Units (SOBUs), the first SOBU including first and second application time stamps (ATSs) that indicate reproducing time information of the SOBU as well as a first application packet disposed between the first and second ATS in which a portion of the content stream data is packed, the second SOBU including a second application packet, an end of which represents an end of the SOB and a mid-point of the second SOBU, and a stuffing packet in which the second ATS is copied and in which a payload is recorded, and the third SOBU including stuffing packets for correction including an ATS; and

a recording unit which records the SOBUs generated by said SOBU generating unit and the mapping list generated by said control unit.

21.   (ORIGINAL)   The recording apparatus of claim 20, wherein all SOBUs, excluding a last SOBU, have at least two entire ATSs.

22.   (ORIGINAL)   The recording apparatus of claim 21, wherein said SOBU generating unit includes a stuffing packet for correction in the last SOBU.

23.   (ORIGINAL)   The recording apparatus of claim 22, wherein the recording unit continuously records the stuffing packet after a last one of the application packets included in the SOB.

24.   (ORIGINAL)   The recording apparatus of claim 23, wherein an ATS included in the stuffing packet for correction has a same value as an ATS included in a last stream pack of the SOBUs.

25.   (ORIGINAL)   The recording apparatus of claim 24, wherein the stuffing packet for correction further includes a payload in which predetermined data is recorded or no data is recorded.

26.   (ORIGINAL)   The recording apparatus of claim 25, wherein a "0" is recorded in the payload.

27.   (CURRENTLY AMENDED)   A recording apparatus to record a Stream OBject (SOB) formed with first and second Stream OBject Units (SOBUs), the first SOBU including first and second application time stamps (ATSs) that indicate reproducing time information of the SOBU, and a first application packet disposed between the first and second ATS in which a portion of the content stream data is packed, and the second SOBU including a second application packet, an end of which represents an end of the SOB and a mid-point of the second SOBU, and a stuffing packet in which the second ATS is copied and in which a payload is recorded, the recording apparatus comprising:
        a clock generation unit to generate a clock value;
        a buffer unit to attach the clock value provided from said clock generating unit to received content stream data, and to output the received content stream data;
        a stream object unit (SOBU) generating unit to generate the SOBUs by packing the received content stream data output from said buffer unit;
        a control unit to generate a mapping list as search information by regarding a last one of the SOBUs which has no corresponding ATS as having a virtual ATS; and
        a recording unit to record the SOBUs generated by said SOBU generating unit and the mapping list generated by said control unit.

28.   (ORIGINAL)   The recording apparatus of claim 27, wherein said control unit generates a mapping list having an incremental application packet arrival time (IAPAT) obtained by regarding a last application packet included in the SOB as having a virtual ATS.

29.   (CURRENTLY AMENDED)   A reproducing apparatus to reproduce content stream data from a recording medium on which content stream data is recorded as a Stream OBject (SOB) formed with first, second, and third Stream OBject Units (SOBUs), the first SOBU

7

including either first and second application time stamps (ATS) that indicate reproducing time information of the SOBU as well as a first application packet disposed between the first and second ATS in which a portion of the content stream data is packed, the second SOBU including a second application packet, an end of which represents an end of the SOB and a mid-point of the second SOBU, and a stuffing packet in which the second ATS is copied and in which a payload is recorded, and the third SOBU including stuffing packets for correction including an ATS, the reproducing apparatus comprising:

a reading unit to read a mapping list as search information and a corresponding SOBU, where the mapping list has search information generated by regarding the last SOBU as an SOBU having a virtual ATS;

a control unit to control the reading unit to read the corresponding SOBU, referring to the mapping list read by the reading unit;

a clock generating unit to generate a clock value;

an SOBU analyzing unit to extract content stream data by analyzing the SOBU read by said reading unit; and

a buffering unit to output the content stream data from the SOBU analyzing unit by buffering the content stream data based on a clock value provided by said clock generating unit.

30. (ORIGINAL) The reproducing apparatus of claim 29, wherein the mapping list includes an incremental application packet arrival time (IAPAT) indicating a duration of the corresponding SOBU as search information indicating a corresponding SOBU of a corresponding SOB.

31. (ORIGINAL) The reproducing apparatus of claim 30, wherein an ATS included in the stuffing packet for correction is a predetermined ATS and has the same value as an ATS included in a last stream pack of the SOBUs.

32. (ORIGINAL) The reproducing apparatus of claim 31, wherein the stuffing packet for correction further includes a payload in which predetermined data is recorded or no data is recorded.

33. (CURRENTLY AMENDED) An apparatus comprising:

a recording apparatus to record a Stream OBject (SOB) formed with first and second

8

Stream OBject Units (SOBUs), the first SOBU including first and second application time stamps (ATSs) that indicate reproducing time information of the SOBU, and a first application packet disposed between the first and second ATS in which a portion of the content stream data is packed, and the second SOBU including a second application packet, an end of which represents an end of the SOB and a mid-point of the second SOBU, and a stuffing packet in which the second ATS is copied and in which a payload is recorded, said recording apparatus including:

 a recording control unit to generate a mapping list as search information;

 a clock generation unit to generate a clock value;

 a buffer unit to buffer input content stream data, to add the clock value provided by the clock generation unit to the input content stream data, and to output a result;

 a Stream Object Unit (SOBU) generating unit to generate the SOBUs; and

 a recording unit to record the plurality of generated SOBUs and the mapping list on a recordable recording medium; and

 a reproducing apparatus to reproduce data from a reproduceable recording medium, the reproducing apparatus including:

 a reading unit to read the mapping list as search information; and

 a reproducing control unit to search for a corresponding SOBU by referring to a generated search information and regarding a value of the predetermined application time stamp as the value of an application time stamp for the last one of the SOBUs in the stream object when referring to the read mapping list.